



Medical Waste in Maryland

**By Claire Nguyen
In Collaboration with
Ginny Seyler and Sharmi Das**



Introduction

- Waste handling and disposal has a direct impact on the public's health
- Inappropriate or improper handling, treatment or disposal may result in individual, as well as community health problems
- There are many laws and regulations concerning the disposal of medical waste in Maryland
- Currently, these do not work in concert



Hazards of Medical Waste

- “Waste generated by health-care establishments, research facilities, and laboratories. In addition, it includes the waste originating from minor or scattered sources such as that produced in the course of health care undertaken in the home (dialysis, insulin injections, etc.).”



Hazards of Medical Waste

- Definitions of medical waste vary greatly across states and regulations
- The EPA, CDC, WHO and OSHA agree that “regulated medical waste” includes those wastes with the potential for causing infection and for which special precautions are prudent



Hazards of Medical Waste

- There is great variation in the composition of medical waste
- Much of the waste that is produced in these settings is not considered hazardous or threatening to human health



Hazards of Medical Waste

- “No epidemiologic evidence suggests that most of the solid or liquid wastes from hospitals, other healthcare facilities, or clinical/research laboratories is any more infective than residential waste.”
- In several studies it was found that household waste is more heavily contaminated than hospital waste



Medical Waste History

- The EPA conducted a pilot study in the late 1980s that provided evidence that the greatest disease-causing potential of medical waste was at the point of generation and such risk naturally decreased the further the waste traveled down the waste stream
- Like other environmental regulation (e.g. air emissions and solid waste) a general regulatory framework was developed, and adopted in each state



Medical Waste History

- Unlike environmental regulation; states were given discretion in how to regulate medical waste
- There has been a proliferation of federal and state regulations enactments to protect the public's health
- The late 1980s and early 1990s ushered in an era of pollution controls and waste minimization programs
- A number of groups supportive of responsible waste policies have been formed



Current Situation in Maryland

- According to the CDC: “Infectious and noninfectious wastes should be separated at the point of generation. If the infectious waste contains noninfectious hazards, it should be identified and subjected to additional treatment”
- There is great variation in classification and handling of waste at a state, municipality and institutional level



Current Situation in Maryland

- Certain medical waste may be sterilized and reused
- Other items cannot be sterilized and are thus disposed
- Medical waste is often stored separately from other waste through “red-bagging”
- Over-classification may result



Current Situation in Maryland

- At Johns Hopkins Medical Institutes, what is colloquially known as the “roto-clave” operation is used
- Other treatment methods include: chemical disinfection, steam autoclaving, gamma irradiation, microwave irradiation, radio frequency irradiation, incineration, sewer disposal for liquid wastes, land-filling



Current Situation in Maryland

- The major Maryland State regulations dealing with medical waste fall under the authority of the DHMH and MDE
- There exists overlap and incongruency between some provisions of the two regulations
- DHMH updated its regulations to reflect the OSHA/MOSH categorization of waste linked to disease transmission



Current Situation in Maryland Problem Areas

- Differing definitions
- The MDE regulations are almost two decades old
- Lack of enforcement of DHMH regulations
- Lack of an approval process for alternative treatment systems



Other Jurisdictions

- States vary widely in their regulation of the handling, treatment and disposal of special medical waste
- Some states do not have any regulations dealing with medical waste while others closely regulate the medical waste stream

Other Jurisdictions

- “In most states, the environmental protection agency is primarily responsible for developing and enforcing regulations for medical waste management and disposal. Although in some states, the department of health may play an important role (e.g., MO, OK) or even serve as the primary regulatory agency (e.g., CO). Where both agencies are involved, typically the department of health is responsible for on-site management and the environmental agency is responsible for transportation and disposal (e.g., LA, MO)”



Synopsis

- Federal regulations provide a relatively comprehensive set of laws to protect the public health
- Data demonstrates that medical waste is not more infectious than other waste
- Public perception that medical waste is more infective than other waste
- It may be unnecessary for DHMH to regulate medical waste



Synopsis

- MDE should be encouraged to review their regulations and update them according to accepted risk standards, such that they are congruent with the DHMH regulations
- The issue of enforcement should be explored
- It is also recommended that a process be put in place to ensure that alternative treatment systems are adequately appraised and approved